



October 12, 2004

DESIGN MEMORANDUM No. 04-12
TECHNICAL ADVISORY

TO: All Design, Operations, District Personnel, and Consultants

FROM: /s/ Anthony L. Uremovich
Anthony L. Uremovich
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Contracts and Construction Division

SUBJECT: Fracture-Critical Structural Steel Members

EFFECTIVE: January 19, 2005, Letting

A fracture-critical member is a component in tension whose failure is expected to result in the collapse of the bridge or the inability of the bridge to perform its function.

The designer should determine which components, if any, are fracture-critical members. Such components should be identified on the plans. These may be identified in a tabular manner. The INDOT *Standard Specifications* apply to non-fracture-critical members. If a structure includes fracture-critical members or main members with a yield point greater than 345 MPa (50 ksi), a unique special provision to specify the Charpy V-notch requirements should be prepared.

Indiana is in temperature zone designation 2, minimum service temperature -18°C to -34°C (-1°F to -30°F), with respect to Charpy V-notch impact requirements.